

## METERS

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### pH-1 micro

The pH-1 micro is a precise fiber optic pH meter. It is temperature compensated and used with pH microsensors based on a 140  $\mu\text{m}$  optical fiber. A PC is connected to run the user-friendly software. pH-1 micro is additionally equipped with an analogue output and a trigger input.

- For use with pH microsensors
- Simple one-point calibration possible
- Software included

## TECHNICAL

### Specifications

pH sensors	HP5	
Temperature sensor	1 x Pt1000 temperature connector (sensor included)	
Temperature performance	0 °C to + 50 °C, resolution $\pm 0.1$ °C, accuracy $\pm 1.0$ °C	
Power supply	18 VDC / 5 W (110 - 240 VAC, 50/60 Hz, adapter included)	
Temperature: operating / storage	0 °C to + 50 °C / - 10 °C to + 60 °C	
Relative humidity	up to 80 % (non condensing)	
Dimensions	210 mm x 120 mm x 50 mm	
Weight	0.65 kg	
Digital interface	RS232 interface (with RJ connector to serial port, cable included)	
External trigger	TTL compatible with galvanic isolation (BNC connector)	
	Dual outputs, 0 - 4.095 mV, resolution 12 bit, accuracy $\pm 10$ nV (BC connectors)	
	10 mV represent	
Analogue output specifications	pH	0.1 pH
	Temperature	1 °C
	Phase	0.25 °

## SENSORS

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### Profiling pH Microsensor PM-HP5



The pH Profiling Microsensor can be used for all profiling applications in semi-solid substrates, such as sediments, microbial mats or biofilms. The PM-HP5 is the most robust version of PreSens pH Microsensors and has a close-fitting fiber guidance and mechanical interlock for precise vertical localization of the measurement tip. The sensor tip is extendable with a turning mechanism.

- Close-fitting fiber guidance
- Mechanical interlock
- High spatial resolution
- Measurement in smallest volumes
- Profiling of pH gradients

## TECHNICAL

### Specifications\*

Measurement range	5.5 - 8.5 pH
Resolution	at pH = 7: $\pm 0.02$ pH
Accuracy	at pH = 7: $\pm 0.1$ pH with sensor calibration
Drift	at pH = 7: $< 0.05$ pH per day (sampling interval of 1 sec.)
Measurement temperature range	from + 5 to + 50 °C
Response time ( $t_{90}$ )	at 25 °C: $< 30$ sec.

### Properties\*

Compatibility	Aqueous solutions, ethanol (max. 10 % v/v), methanol (max. 10 % v/v), pH 2 - 10
No cross-sensitivity	Electrical fields, proteins
Cross-sensitivity	Reduced to ionic strength (salinity); a high concentration of small fluorescent molecules in the visible range can interfere
Sterilization procedure	Ethylene oxide (EtO), recalibration recommended
Cleaning procedure	Water, Acrylan, pepsin solution
Calibration	pH sensors are pre-calibrated, recalibration is possible
Storage stability	24 months provided the sensor is stored in the dark

\* provided pH sensors are used without further handling in physiological solutions

## ACCESSORIES



### Manual Micromanipulator MM

The Manual Micromanipulator MM is specifically designed for PreSens needle-type microsensors (NTH). The system allows moving the microsensor vibration-free in 3 axes with  $\mu\text{m}$  reading accuracy. A solid base plate ensures a stable set-up of the micromanipulator and enables safely tilting the whole system up to  $90^\circ$  - so you can use it in any required position. With the safe-insert function the microsensor retracted in its steel needle can be securely inserted into your area of interest. The sensor tip can then be extended delicately and safely with  $\mu\text{m}$  reading accuracy, without risk of breaking the sensor fiber.

- Safe-insert function for retractable microsensors
- $90^\circ$  tilting mechanism
- Specifically designed for PreSens microsensors
- Vibration-free micromanipulation in 3D
- Fine drive with  $\mu\text{m}$  reading accuracy
- Solid base plate for most stable set-up




## TECHNICAL

### Specifications

Compatibility	Needle-type Housed (NTH), Profiling (PM) and Implantable (IMP) oxygen & pH microsensors
Dimensions	230 mm x 130 mm x 200 mm
Weight	Weight w/o base plate: 1,1 kg Weight with base plate: 3 kg
Travel range	x-axis: 37 mm, fine drive: 10 mm y-axis: 20 mm z-axis: 25 mm
Reading accuracy	Coarse adjustment: 0.1 mm Fine adjustment: 0.01 mm
Coarse positioning	x-axis: 70 mm
Rotability	$360^\circ$
Material	Aluminum & steel

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## GET IN CONTACT

-  **Request more info**
-  **Request a quote**
-  **Rent-a-meter**

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